

Claims

1. Process for producing dental prostheses such as bridges, crowns, implants, etc. from ceramic material, production being carried out at least by way of a CAD/CAM machining station, characterized in that the ceramic material to be worked consists of an unsintered disk-shaped blank (3) or one which has not been subjected to final sintering, that the working of the blank into dental prostheses (8) is undertaken at a right angle or quasi-right angle to the parallel or quasi-parallel surfaces of the blank.

2. Process for a producing disk-shaped blank (3) as claimed in claim 1, wherein by fully isostatic or quasi-isostatic pressing of the ceramic material a cylindrical or quasi-cylindrical compact is formed and wherein a host of disk-shaped blanks (3) of varied thickness are separated from the compact which has been formed in this way at a right angle to its axis.

3. Process as claimed in claim 2, wherein the outer periphery of the compact is cylindrically turned externally.

4. Process as claimed in claim 2, wherein the blank (3) has a diameter of greater than 50 mm.

5. Process as claimed in claim 2, wherein blanks (3) of at least 80 mm diameter are produced in fully isostatic pressing.

6. Process as claimed in claim 2, wherein the blank (3) has a thickness of greater than 10 mm.

7. Process as claimed in claim 1, wherein the ceramic material which has not been subjected to final sintering has hardening which is below the absolute specific weight of this material.

8. Process as claimed in claim 1, wherein the dental prostheses after completed machining both for unsintered blanks (3) and also those which have not undergone final sintering are subjected to the final sintering process until the absolute or quasi-absolute specific weight of the corresponding ceramic material is reached.

9. Process as claimed in one of claims 1-8, wherein the blank (3) has means (6) for its nonpositive clamping in a holding tool (4) of the CAD/CAM machining station.

10. Process as claimed in one of claims 1-8, wherein the blank (3) in the peripheral direction has at least one concentric turned groove (6) for nonpositive clamping in a holding tool (4) of the CAD/CAM machining station.

11. Process as claimed in one or more of claims 1-10, wherein the ceramic material consists of a zirconium oxide.

12. Process as claimed in claims 8 and 11 with respect to achieving an absolute specific weight for the zirconium oxide, wherein the final sintering process is carried out at at least 1500°C for a period of roughly 16 hours.

13. Process as claimed in claim 12, wherein in this final sintering process an absolute specific weight of 6.075 g/mm³ is achieved.

14. Process for producing dental prostheses such as bridges, crowns, implants, etc. from ceramic material, production being carried out at least by way of a cutting machining station, wherein the ceramic material to be worked consists of an unsintered disk-shaped blank (3) or one which has not been subjected to final sintering, that the working of the blank into dental prostheses (8) is undertaken at a right angle or quasi-right angle to the parallel or quasi-parallel surfaces of the blank (3).

15. Machining station for producing dental prostheses such as bridges, crowns, implants, etc., the machining station being built as a cutting, guided and/or CAD/CAM-type system, wherein the machining station is equipped essentially with a pivoting

holding device (4) and at least one milling tool (2), wherein the holding tool has means for nonpositive clamping of a blank (3) which consists of a ceramic or other material, and wherein the parallel or quasi-parallel machining surfaces of the blank can be worked at a right angle or quasi-right angle by the milling tool.

16. Machining station as claimed in claim 15, wherein the material of the blank consists of zirconium oxide.

17. Blank for executing the process and/or as a blank (3) for the machining station as claimed in one of claims 1-16, the blank consisting of a round or quasi-round disk of variable diameter and thickness or some other geometrical external shape of variable outside dimension and thickness.